2.0 Issues and Key Questions

The purpose of this chapter is to focus on the key elements of the ecosystem relevant to future land management activities, and to identify data and analysis needed to provide broad direction for future projects. These issues and key questions were identified and developed by the interdisciplinary team. Major issues of immediate concern are identified and characterized. Key questions have been developed.

2.1 Vegetation Dynamics

The "Caribou National Forest and Surrounding Area Sub-Regional Properly Functioning Condition Assessment" and other similar broad scale assessments have indicated that existing vegetation distribution, structure, and composition are outside the historic range of variability across much of the Soda Springs Ranger District. Therefore, the vegetation within the Blackfoot watershed assessment area is likely also outside historic ranges, which has the potential to adversely affect ecosystem function.

Key Questions

Non-Forested Vegetation

1) How has the structure of non-forested cover types changed? (Indicator - structure class reported by cover type)
2) How has the disturbance regimes of non-forested cover types changed? (Indicator - disturbance regimes reported by cover type)
3) How has the presence of noxious weed affected native vegetation?

Forest Vegetation

1) How has the structure of the forested cover types changed? (Indicator - structure class reported by cover type)
2) How has the density of the forested cover types changed? (Indicator - density reported by cover type)
3) How has the species composition of the forested cover types changed? (Indicator - species composition reported by cover type)
4) How has the disturbance regimes of the forested cover types changed? (Indicator - disturbance regimes reported by cover type)

2.2 Hydrologic Processes and Water Quality

Current management may be impacting stream function and water quality or impeding recovery from historic impacts. Opportunities for stream restoration and the potential for future development activities are drivers for this watershed-wide study.

Key Questions-

1) How have impairment of riparian function, reduction of streamside vegetation, stream channel and bank stability affected water quality? Indicators: Proper Functioning Condition and Pfankuch assessments.

2) How have pollutants associated with mine waste dumps impacted streams and other waters? Indicators: Pollutant reports and impairment of beneficial uses.

3) What are the major sediment sources and what effect are they having on water quality? Indicators: AIZ motorized route density, number of motorized route stream crossings, impairment of beneficial uses, IWWI Water Quality Integrity.

4) What watershed characteristics are present or ground disturbing actions that have occurred increasing risk of impact to aquatic resources? Indicators: IWWI Watershed Vulnerability, percent hydrologic disturbance.

5) How are past management practices or activities affecting the current condition? Indicators: Analysis of historical uses, impacts and recovery trends.

2.3 Soil Resources

What are the major ground-disturbing management activities occurring in the watershed? Is the land capable of maintaining productivity while sustaining the impacts of these activities? How much of the watershed has been detrimentally disturbed by past activities, and have past watershed protection efforts improved soil conditions?

Key Questions-

1) What are the major effects to soil resources from livestock grazing in the watershed? Is livestock grazing causing accelerated erosion on upland sites and riparian areas and, if so, to what extent? Is the amount of ground cover that protects soils from erosion adequate to maintain stable soil conditions within the watershed?
2) What is the extent of mining within the watershed? How many acres have been affected? How effective have reclamation efforts been in returning productivity? How many acres of selenium-affected waste sites exist?
3) What amount of vegetation management has occurred in the watershed, and what have been the effects of this management to soil resources?
4) Is motorized recreation use adversely affecting soil productivity in the watershed? What are the effects of the existing authorized roads and trails on soil resources? Have off-road and trail restriction been effective at controlling soil erosion/disturbance? Have all areas that

require watershed restoration been identified and has there been a restoration plan developed for this watershed?

5) Are riparian soils being adversely compacted/eroded from dispersed recreation?

2.4 Fisheries and Aquatic Habitat

Two key native fish species in the analysis area are Yellowstone cutthroat trout (Regional Forester Sensitive species and Idaho Species of Concern) and northern leathersides (Idaho Species of Concern). The decline of the Blackfoot River Yellowstone cutthroat trout population is well documented. Northern leathersides have been documented in Angus Creek in the past but recent surveys have not been able to locate the population. Land uses within the watershed include grazing, mining, logging, road and trail building/maintenance, irrigation, farming, and angling (a vector for the introduction of non-native fish and nuisance species).

Key Questions-

1) What land uses have caused the decline of Yellowstone cutthroat trout and northern leathersides and what changes could decrease these effects?

2) What are the dominant sediment delivery mechanisms in the analysis area and how did they compare with natural processes? Where are the high risk areas?

3) What upstream migration barriers for fish exist in the analysis area? What actions are required to address these barriers?

4) Where are the irrigation diversions within the analysis area and to what degree do they entrain downstream-migrating fish?

5) How and to what extent has native fish in the analysis area been affected by the introduction of non-native fish? What actions are required to address these concerns?

6) What survey and monitoring should be conducted to gain a better understanding of the quality and quantity of aquatic species habitat and populations?

7) How are downstream land use practices affecting aquatic biota on the Forest and what actions can agencies and organizations take to address them and, in turn, benefit Forest aquatic biota?

2.5 Wildlife and Rare Plants

The viability of some wildlife and rare plant species may have been impacted by past and present activities.

Key Question-

1) Are viable populations of native and non-native species being maintained?

2) Are the ecological processes being maintained to provide for viable populations of wildlife and rare plants?

2.6 Human Uses

Minerals and Mining

From a geology and mineral resource perspective, the only key issue relates to the past, present, and potentially future phosphate mining and related operations and their effects on the other resources present (see phosphate report). The future development potential for oil and gas resources is too uncertain to add meaningful discussion at this time.

Key Questions-

1) Is there a need for the further development of existing mineral material sources (for road surfacing) in the watershed and/or the development of new source areas. New sources would need to be located and evaluated.
2) Is there a need to develop sites for the extraction of larger rocks for uses such as small landscaping projects at individual homes and businesses in the area.
3) Is there a potential for the development of a "recreational" site for the interpretation and collection of common invertebrate marine fossils (horn corals, snails, cephalopods, brachiopods, bryozoans, etc.).

Range Management

Existing Issues and Concerns

Allotment	Conditions and Concerns
Rasmussen Valley	This was an excellent allotment in the past. Currently active mining has removed one complete unit from grazing use. On a good forage year the cattle can manage adequately on the remaining units. In 2007 the cattle came on about two weeks late and were required to leave early also to prevent excessive use. Revegetated mine dumps could be used to alleviate the problem if the cattle were allowed to use them.
Dry Valley	Mining has displaced cattle from areas where they previously grazed.
Diamond Cr.	Good allotment, but there are major conflicts between recreationists and livestock grazing. The allotment is long and narrow, running along Diamond Creek. The majority of the places where people like to camp are the same places where the cattle like to shade up.

Several mine dumps on the Rasmussen Valley Allotment and Dry Valley Allotment are closed to grazing because of high concentrations of selenium found within those dumps; yet other dumps not far from the ones that are close are open to grazing. Those open to grazing were turned back to Forest Service management before problems with selenium were recognized. Selenium is also present on those dumps where livestock grazing is allowed. The permittees who graze their livestock on these dumps do not believe that selenium is a significant threat to their livestock.

These permittees have grazed their cattle on these dumps for many years and have had no problems.

Recreation Issues

Camping
Includes both designed campgrounds and dispersed camping associated with increasing users.

1) Long term dispersed camping during hunting season can have negative impacts on the watershed and range resource.
2) Demand for dispersed/campground camping continues to climb and needs to be addressed for associated resource impacts as well as the need to accommodate growing demands.

Diamond Creek Campground
The Diamond Creek Campground needs to be updated moved or closed was at one time the CCC camp for the area and still has the foundation of the old building.

All Terrain Vehicles

1) ATV use on the Soda Springs District has increased dramatically from 1995 to present. Designated trail restrictions were not enforced until the Travel Management Plan was signed in 2005. Illegal trails have declined somewhat since 2005 but continue to be a problem for wildlife security and other Forest resources.

Trail Maintenance and Realignment

1) As Forest budgets declined and costs have gone up trail maintenance has suffered. Most trails in the analysis area are in respectable shape while others need to be maintained on a yearly basis.
2) User created motorized trails that were accepted in the Travel Plan need to be maintained and have sections realigned to meet RFP minimum Standards.

Resource Conflicts
User conflicts have occurred when permitted livestock (cows) do something such as rub against camp trailers or when cows are harassed by ATV riders, dogs and dispersed campers. The allotment permittee has noted the difficulty of managing livestock and forage with the increase of dispersed camping and general recreation use.